



# Influence Simulation Model Learning to Motivation and Learning Outcomes Participant Educate Class X In English Subject

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## Abstract:

The aim of the research is to determine effective learning models in English subjects to improve motivation and learning outcomes. Methods research used is experiment quantitative with design factorial two, where the variables tied up is results learning English, while variable free is motivation learning and the learning model being tested (learning model based on simulation and projects). The population of this study was all grade X students of SMA Insan Kamil Bogor, and the sample used was selected randomly using the random cluster sampling technique. Two group chosen For taught with two different learning models (learning models) based on simulation and learning models based on project. Research results show existence improvement motivation and results Study participant educate in eye English lessons after taught use second method said. Besides that, there is interaction between the learning models used with motivation and results learn English participant educate. However, no found significant difference between results Study participant students who are taught using a learning model based on project with what is taught using a learning model based on simulation. In conclusion, use an appropriate learning model with eye lesson can increase results learning and motivation participant educate, so that experience Study they become more maximum.

**Keywords:** English, Learning models, Learning outcomes, Motivation learning.

## 1. INTRODUCTION

English is one of the language used by many countries international, more of the 50 countries make Language English as Language national. So that Language English Lots used in many media such as films, journals, books, music and many more again. For That skills in Language English very much important for participant educate For facing the current era of globalization happened. According to (Aziza, 2020) that state that in a world that has go global No Anyone can reject Again importance Language English because of Language English is language used anywhere in the world This. Ilyosyna also emphasized that Study Language English very much important For development self in the future front Later Because If participant educate own skill in

Language English so will Lots open opportunities and opportunities later during the work period. Many companies need employees who can communicate globally (Aziza, 2020).

For develop ability Language English so the need A treatment special For increase skills Language English in learning at school, so that participant educate can face challenges and benefits from the era of globalization this. However most from educators who teach at Insan Kamil High School use the learning model conventional in various type eye lesson in a way continuously so that make participant educate feel bored and fed up, the result motivation from participant educate on time learning in progress That Already low, and results in down results Study participant educate in eye lesson Language English. Based on results interviews conducted in study introduction, results Study participant educate in the eyes lesson Language English Enough low, so that only 60% of One class the achieve the KKN determined by the school, and the remaining 40% No sufficient for KKN. For overcome low results Study participant educate in eye lesson Language English, then research was also conducted For look for an appropriate learning model with eye lesson Language English and its influence to motivation and results Study participant educate.

Researcher to hypothesize that there is difference results Study participant educate in the eyes lesson

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Language English when participant educate studied with learning models based on simulation and project, then researcher to hypothesize that there is influence interaction between learning models and motivation with results Study participant educate in the eyes lesson Language English, and finally researcher to hypothesize that there is significant difference between participant students who study learning models based on simulation with learning models based on project Good in motivation tall and also low.

Every from the learning model that will be tested own advantages and disadvantages of each, before to discuss about learning models, let's We discuss about Study moreover before. According to (Woolfolk, 2020) which defines Study as stages change knowledge or relative behavior permanent caused by experience. From the definition This emphasize that Study is a process of change significant behavior in method somebody understand or act as results from interaction somebody the with experience and environment certain. So if students have change in behavior in a activity so That is proof Where participant educate the Already or currently experiencing the learning process. With like this Study No only activities carried out by participants educate in class, but Study is activities resulting from interaction between individual with another individual or individual the with environment that results in the occurrence A experience.

(Santrock, 2021) define results Study as ability participant educate in apply knowledge that has been obtained in context practice, and results This usually measured with using assessment instruments such as, test and portfolio learning. If learning can seen with existence change behavior so results Study can seen with use research certain to knowledge gained by a person the with use tests and tools measuring others. And the results Study this is also a a parts used by educators For measure achievement goal learning, if results Study participant educate No in accordance with objective learning that has been done determined so need There is development and improvement in learning that has been done. To make it easier educator to design systematic, effective and efficient learning model is one of the solution For help in design the.

According to (Merrill, 2012) that state that learning model is framework Work systematically arranged For organize experience Study participant educate. The learning model aiming For maximize learning with merge theory with practice in context relevant education. Can also known as a learning model is series planning prepared by educators For maximize experience learn. With the many learning models that exist especially in research This only will introduce

two the type of learning model used, namely the learning model based on projects, and learning models based on simulation.

According to (Condliffe et al., 2017) Learning based on project is method learning where participants educate involved in a way active in projects that require study deep as well as implementation relevant concepts in life real. Learning model this also involves participant in activity breakdown real world problems that are relevant, useful and mobilizing participant educate on understanding deep about knowledge the. (Almazroui, 2023) In education advanced learning based on project involving students working on a project that mimics real world scenarios, so that allow they For apply draft theoretical they into the situation practical, learning this also involves student in investigations, investigations, and collaborations that will be can create opportunity for student the For build knowledge and develop skills they For think critical (Musa et al., 2011).

With use learning based on project, participants educate become more active participate in journey learning they alone, learning This also makes participant educate For responsible answer on education them, and can foster a sense of autonomy and learning independent (du Toit-Brits, 2019). An approach that involves participant This push more involvement deep and responsible more answers big to results Study they later. Besides That learning This push participant educate For collaborate between participant educate others, so that can make participant educate For exchange perspective, develop method effective communication and skills For Work The same (Hussein, 2021).

In general overall learning model based on project This give chance for participant educate For bridge gap between theory and practice, learning models This also provides participant educate experience solve authentic problems that can be make it possible participant educate For see relevance from knowledge and its application in real world context (Rahman et al., 2022).

Learning based on simulation offer learning with approach practice, which makes limitations learning in situation life real resolved, and learning This can become effective approach in development complex skills (Chernikova et al., 2020). (Beaubien, 2004) define simulation as A tool that produces characteristics life real from a incident or situation. For more definition especially by (Cook et al., 2013) those who stated that simulation " as tool or device education used by participants educate For interact in a way physique For copy life real " and they also

emphasized the “ need for interact between things authentic ”. Objects authentic here means items used in learning that makes situation learning more resemble the actual condition. Of the two definition the can concluded that learning simulation is imitative learning or resemble situation and conditions his life real so that participant educate can have more readiness when faced with with situation and conditions the.

Many of learning simulation done in various field, lately This learning based on simulation often used in field medical and learning health (Ledger & Fischetti, 2020). Although use from the learning model this is in the field education Still in stages development (Shapira-Lishchinsky, 2013); (Levin et al., 2023); (Frei-Landau & Levin, 2023), has acknowledged that learning model simulation can help teacher graduates to face future challenges Later (Dieker et al., 2014) (Kaufman & Ireland, 2016) with give chance For apply knowledge theoretical to in behavior (Theelen et al., 2019). With that's the learning model simulation recommended and implemented in field education (Ade-Ojo et al., 2022).

In learning based on simulation participant educate will often find diverse scenarios that require they For processing and integrating Lots information in a way fast. They must Can differentiate between relevant and not relevant data relevant, recognizing existence a patterns, and connecting dot, dot, dot the For to create a coherent experience about situation scenarios faced by participants educate. With involvement continuously with complex information This help to perfect ability analysis participant educate. Aspect arrangement self in think critical also increased through learning models based on simulation. Because simulation often give bait bye in a way direct, participants educate can evaluate How actions and decisions they influence results learning.

Moreover Again often participants educate faced with with breakdown problem in a way collaborative, where they need communicate in a way effective, negotiable, and sometimes make decision together. Elements collaborative this is very important for participant educate For develop thinking critical. However element collaborative in learning models This No lah always positive, according to, the elements collaboration from the learning model This can make participant educate experience negative feelings, such as shame, and demotivation. To prevent matter the educator need to design learning more relevant with normal state happens in life everyday so that participants educate can more comfortable moment learning ongoing.

In general term motivation originate from the word "motif", which is Power the mover in self somebody For do a action certain in reach its purpose. In to shorten it motivation is the energy that moves the effort that makes somebody do activity For reach its purpose. In learning motivation has considered as factor important in success participant educate. According to Dörnyei and Ushioda (2010), motivation explain why people decide For do something, how long they tend For continue action said, and how much ambitious they For do it. Motivation can classified as intrinsic or extrinsic, and research has show that motivation intrinsic and extrinsic in a way significant influence results Study participant educate in eye lesson Language English.. Dörnyei (1994) explains that someone who has motivation intrinsic do something Because existence internal strengthening, while someone who has motivation extrinsic do something Because existence strengthening external. With so can concluded that motivation own role important to the results Study participant educate, and the existence of interaction between both of them.

## 2. MATERIAL AND METHOD

In this study, the population included all tenth grade students at Insan Kamil High School in Bogor. The sampling method applied was random cluster sampling, where two groups or classes from the population were randomly selected. Furthermore, each group was given different treatments according to the learning model that had been determined. The first group was tested using simulation-based learning model, while the second group was tested using project-based learning model.

The data collection instruments used in this study consisted of three types, namely the educational test results of the study participants, questionnaires, and observations and interviews. This study began with the preparation stage, where the researcher provided guidance to the educator regarding matters that needed to be considered during the learning process, with the aim of ensuring that the learning was in accordance with the research design. Next, the researcher observed the learning activities to observe the learners' engagement. In addition, interviews were also conducted with educators to obtain information related to learners' involvement during learning, including their motivation from the beginning to the end of the learning process. These observations and interviews were conducted three times to ensure the consistency of the data obtained.

After the learning process was complete, researchers distributed questionnaires to students to measure their motivation level. In the final stage, the researcher

distributed learning test results to learners to evaluate the development of their learning outcomes, especially in English subjects. All data collected was analyzed using parametric statistics, with normality tests calculated using SPSS software.

### 3. RESULT AND DISCUSSION

After all the data was collected, the researcher analyzed it in stages to ensure the data could be analyzed using parametric statistical methods. The first step taken was to conduct a normality test to determine whether the data had a normal distribution. This test was carried out using SPSS software, and the results of the data analysis are seen in table 1

**Tabel 1.** Normality test analysis results

	Group	Kolmogorov-Smirnov <sup>a</sup>			Shapiro Wilk		
		Statistics	df	Sig.	Statistics	df	Sig.
Learning outcomes	Learning Simulation	.174	30	.021	.952	30	.192
	Learning project	.125	30	.200 <sup>*</sup>	.940	30	.092

The results of the normality test analysis shown in the previous table 1 indicate that the data has a normal distribution. This can be seen from the significance values generated, both through the Kolmogorov-Smirnov and Shapiro-Wilk tests, which are all greater than 0.05. Thus, the data collected meets the basic assumptions to be analyzed using parametric statistics, giving stronger validity to the results of the analysis to be conducted.

The next step is the data homogeneity test, which aims to ensure that the data variances of the compared

groups are homogeneous. This test is important to ensure the validity of comparing results between experimental and control groups. The results of this homogeneity test provide further insight into the similarity or differences in the distribution of data between groups, so that the researcher can proceed with the analysis with confidence that the data used meets the necessary statistical assumptions. The following are the results of the homogeneity test conducted.

**Tabel 2.** homogeneity test results of learning based on simulation

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	625,450	13	48.112	1,777	.138
Within Groups	433,250	16	27,078		
Total	1058.700	29			

**Tabel 3.** homogeneity test results of learning based on project

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	591,900	8	73,988	2.935	.023
Within Groups	529,467	21	25.213		
Total	1121.367	29			

From the results of the data homogeneity test, it can be seen that the significance value of both groups is greater than 0.05. This indicates that the data variance of the two groups is homogeneous. Thus, the data qualify for further analysis using the T-test.

Next, the researcher conducted a T-test to test the research hypothesis, namely whether there is a significant difference in students' learning outcomes in English subjects between the project-based

learning model and the simulation-based learning model. This T-test aims to see whether the learning model applied has a different effect on the learners' learning outcomes. The results of the T-test analysis showed a significant difference, which provides strong evidence for the research hypothesis. Below is the full analysis result, which will be discussed further to understand the implication of this finding in the context of learning model implementation.

**Tabel 4.** T-test analysis results

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Learning outcomes	Learning Simulation	30	75,633	3.3885	.6186
	Learning project	30	71,200	2.5107	.4584

Independent Samples Test										
	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Learning outcomes	Equal variances assumed	2.267	.138	5,758	58	.000	4.4333	.7700	2.8921	5.9746
				5,758	53,468	.000	4.4333	.7700	2.8893	5.9774

Based on the results of the T-test table, a significance value smaller than 0.05 was obtained. This indicates that there is a significant difference between the learning outcomes of students taught using the simulation-based learning model and those taught using the project-based learning model. This difference indicates that each learning model provides a different influence on the achievement of student learning outcomes.

Furthermore, to test the hypothesis regarding the interaction effect between learning model and

learning motivation on students' learning outcomes in English subject, the researcher conducted a two-way ANOVA test. This test aims to determine whether the interaction between two independent variables, namely learning model and learning motivation, has a significant influence on the dependent variable, namely student learning outcomes. The following are the results of the two-way ANOVA test analysis that will provide a clearer picture of the interaction effect between learning model and motivation on learning outcomes.

**Tabel 5.** Inter-Subject Effect Test results  
Tests of Between-Subjects Effects

Dependent Variable: Learning Outcomes					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	592,450 a	3	197,483	50,699	.000
Intercept	323400.417	1	323400.417	83024.557	.000
Group	294,817	1	294,817	75,686	.000
Motivation	294,817	1	294,817	75,686	.000
Group * Motivation	2,817	1	2,817	.723	.399
Error	218,133	56	3.895		
Total	324211.000	60			
Corrected Total	810,583	59			

a. R Squared = .731 (Adjusted R Squared = .716)

Based on the results of the two-way ANOVA test analysis, a number of important conclusions were obtained based on the resulting significance value:

1. The significance value of 0.00 (smaller than 0.05) indicates that there is a significant difference in learning outcomes between students taught with simulation-based learning model and project-based learning model. This indicates that each model has a different influence on student learning outcomes.
2. The significance value of 0.00 (smaller than 0.05) also shows that there is a significant difference in learning outcomes between students with high motivation and students with low motivation. In other words, learning motivation plays an important role in the achievement of learning outcomes.
3. However, the significance value of 0.339 (greater than 0.05) indicates that there is no significant interaction between learning motivation and learning model on students' learning outcomes in English. This means that the effects of each

independent variable (motivation and learning model) on learning outcomes are independent and do not influence each other.

In the final stage of the research, an additional comparison test was conducted to analyze students' learning outcomes based on the same combination of learning model data and motivation level. The t-test was used to compare learning outcomes between:

1. Highly motivated students taught using the project-based learning model versus the simulation-based model.
2. Low-motivated students taught using the project-based learning model versus the simulation-based model.

The results of this t-test provide a deeper understanding of how the level of student motivation affects the effectiveness of each learning model. The following t-test analysis results will be discussed further to reveal the detailed differences between the groups.

**Tabel 6.** t-test comparison results Study of the two learning models

Group Statistics								
	Motivation tall	N	Mean	Std. Deviation	Std. Error Mean			
Learning outcomes	Learning based on simulation	15	78.07	2.815				.727
	Learning based on project	15	73.20	1.373				.355
Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Learning outcomes	Equal variances assumed	8,361	.007	6.018	28	.000	4,867	.809
	Equal variances not assumed			6.018	20,306	.000	4,867	.809
							95% Confidence Interval of the Difference	
							Lower	Upper
							3.210	6,523
							3.181	6,552

Based on the results of the T-test comparison, a significance value of 0.00, which is smaller than 0.05, was obtained. This indicates that there is a significant difference in students' learning outcomes in English language subjects between students taught with simulation-based learning model and students taught with project-based learning model.

This difference indicates that the two learning models have different impacts on the achievement of students' learning outcomes. The simulation-based

learning model tends to be effective in improving the understanding of theoretical concepts, while the project-based learning model is superior in training analytical skills and practical application. These findings provide important insights for educators to choose learning models that suit specific learning needs and objectives.

**Tabel 7.** T-test comparison results

Group Statistics										
	Motivation low	N	Mean	Std. Deviation	Std. Error Mean					
Learning outcomes	Learning based on simulation	15	73.20	1,781	.460					
	Learning based on project	15	69.20	1,612	.416					

  

Independent Samples Test										
	Levene's Test for Equality of Variances		t-test for Equality of Means							
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	
								95% Confidence Interval of the Difference		
Learning outcomes	Equal variances assumed		.095	.761	6,449	28	.000	4,000	.620	2,729 5,271
	Equal variances not assumed				6,449	27,728	.000	4,000	.620	2,729 5,271

Based on the T-test comparison results, the significance value obtained is 0.00, which is smaller than 0.05. This indicates that there is a significant difference in learners' learning outcomes in English language subject between the group taught with simulation-based learning model and the group taught with project-based learning model. This finding corroborates that the two learning models have different approaches and have different impacts on learners' learning outcomes.

However, since this research was conducted in a relatively short period of time, the depth of data collected is not enough to thoroughly analyze the importance of learning models in improving learners' motivation and learning outcomes. If given the opportunity to continue this research, the researcher hopes to have more time and adequate manpower support. Thus, the research can be conducted in more depth and provide greater benefits, both for learners, educators, and readers of this journal. The researcher also hopes that future findings can be a more comprehensive reference in developing effective learning models.

#### 4. CONCLUSION

The conclusion of this research is that the selection of learning models in the learning process has a very important role in the development of learners. The results of this study prove that the right learning model can increase the enthusiasm and motivation of students, and encourage the improvement of their

learning outcomes. In addition, the atmosphere in the classroom becomes more active and comfortable, both for learners and for educators who become their role models.

The researcher hopes that the findings from this study can provide significant benefits for educators in designing and implementing more effective learning, as well as having a positive impact on learners. In addition, this research is expected to provide valuable insights for readers of this journal, so that they can gain knowledge that can be applied in a broader educational context.

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